REMARKS

Claims 1-6 are pending in the present application.

Reconsideration of the application is requested.

Claims 2, 3, and 4 remain in the application. Claims 1, 5, and 6 have been cancelled. Claims 7, 8, and 9 have been added. Claims 2, and 4 have been amended.

In item 1 on page 2 of the above-identified Office Action, the Examiner objected to the specification because of an informality. The Examiner's suggested corrections have been made.

In item 2 on page 2 of the above-identified Office Action, the Examiner objected to the claims because of an informality. The Examiner's suggested corrections have been made.

In item 3 on page 2 of the above-identified Office Action, claim 6 has been rejected as being indefinite under 35 U.S.C. § 112, second paragraph.

More specifically, the Examiner states that "it is not understood what is being referred to by the 'modulation pair selection unit.'"

Claim 6 has been cancelled.

It is accordingly believed that the specification and the claims meet the requirements of 35 U.S.C. § 112, second paragraph. The above noted changes to the claims are provided solely for the purpose of satisfying the requirements of 35 U.S.C. § 112. The changes are neither provided for overcoming the prior art nor do they narrow the scope of the claim for any reason related to the statutory requirements for a patent.

In item 5 on page 2 of the above-identified Office Action, claims 1, 2, 5, and 6 have been rejected as being fully anticipated by Wang (World International Publication Number WO 01/18987) under 35 U.S.C. § 102.

The rejection has been noted and the claims have been amended in an effort to even more clearly define the invention of the instant application. Support for the changes is found on page 10 of the specification of the instant application.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. Claim 7 calls for, *inter alia*:

> determining a transmission configuration for a first channel as a function
>
> of Peak-to-Average Ratio (PAR) on the first channel. . .

if the spreading code is used by another channel in the wireless
communication system, **determining the next best optimum transmission
configuration, based on a resultant PAR value;**

and

applying the **next best optimum transmission configuration** to the first
channel.

Paragraph 1034 explains, and FIG. 6 of the instant application illustrates, the method for
selecting a transmission pair including a modulation path, i.e., I branch or Q branch, and a
spreading code. The process 600 begins at step 602 where an optimum transmission pair is
determined. In decision block 604, if the selected code is in use on another channel, the process
then determines a next best optimum transmission pair based on a resultant PAR value. The
determination method is described on pages 11 and 12 of the instant application.

The Wang reference discloses a wireless communication system having at least one base
station operative to receive signals from terminals that are modulated according to scrambling
codes assigned to the terminals. The system further includes means, operatively associated with
a base station, for assigning scrambling codes to terminals based on power characteristics of
terminals. (Page 6, lines 24-31). Priority among the scrambling codes is based on numbers of
occurrences of chip strips that produce peaks in signals modulated by the scrambling codes.
(Page 7, lines 29-31).

Although Wang also describes a "next best" code, the code in Wang is not based on
whether or not the spreading code is used by another channel in the wireless communication
system, as recited in claim 7 of the instant application. Wang shows that the "next best"
scrambling code may be used to minimize power dissipation. (Page 9, lines 18-22). Wang goes
on to say that a "next best" criteria may apply, for example, where certain favorable codes are
reserved for certain terminals, to the effect that other terminals may be assigned codes which,
although "optimal" in the sense that they are "the best available," may also be viewed as
suboptimal. (Page 9, lines 22-25).

Clearly, Wang does not show that if the spreading code is used by another channel in the
wireless communication system, **determining the next best optimum transmission**

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configuration, based on a resultant PAR value; and **applying the next best optimum transmission configuration to the first channel,** as is recited in new claim 7.

Additionally, the system in Wang has at least one transmitter including quadrature modulators. The peak-to-average ratio of the output signal is reduced by assigning codes, derived from Kasami sequences, to the modulator 330. A cumulative distribution function is used to calculate occurrences of bad chip strips in a set of Kasami sequences, which may be used as I and Q components of a complex scrambling code. (Page 11, lines 13-16). I and Q component sequences of a particular complex code are also **cyclically** shifted to optimize the number of places where bad chip strips of the I and Q sequence coincides. (Page 11, lines 21-23). Wang utilizes preselection of modulation codes to control the PAR of the input. (Page 6, lines 14-16).

The output of the Wang method is a simply a product of inputting a scrambling code that is predicted to reduce the PAR. Wang does not show **determining** a transmission configuration as recited in claim 7 of the instant application. Wang also does not show that if the spreading code is used by another channel in the wireless communication system, updating the transmission configuration as a function of PAR as recited in claim 1 of the instant application.

It is accordingly believed to be clear that the Wang reference neither shows nor suggests the features of claim 1. Claim 1 is, therefore, believed to be patentable over the art. For at least the same reasons claim 7 is believed to be patentable, independent claims 8 and 9 are also believed to be patentable. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claim 7.

In item 8 on page 4 of the above-identified Office Action, claims 3 and 4 have been rejected as being obvious over Wang (World International Publication Number WO 01/18987) in view of Choi et al. (U.S. Patent Appl. 2002/0018457) under 35 U.S.C. § 102.

Considering the above-mentioned deficiencies of the Wang reference with regard to new claim 7, and the fact that claims 3 and 4 ultimately depend on new claim 7, it is believed not to be necessary at this stage to address the secondary Choi et al. reference applied in the rejection of claims 3 and 4, and whether or not there is sufficient suggestion or motivation with a reasonable expectation of success for modifying or combining the references as required by the MPEP § 2143.

In view of the foregoing, reconsideration and allowance of claims 2–4 and 7-9 is solicited.

Specification

Applicant provides herewith amendments to the specification. The amendments to the specification are made by presenting marked up replacement paragraphs which identify changes made relative to the immediate prior version.

The changes made are primarily typographical or grammatical in nature, or involve minor clarifications of awkward wordings.

Applicant believes these changes add no new matter to the application and are fully supported by the original disclosure.

REQUEST FOR ALLOWANCE

In view of the foregoing, Applicant submits that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application are earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

Dated: 3/19/2004

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